

## Hand lever valves VHER, NPT

**FESTO**




# Hand lever valves VHER, NPT

Key features

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## Powerful

-  - Flow rate  
600 ... 4,300 l/min

## Versatile

- 4/3-way valve  
Mid-position closed  
Mid-position exhausted
- Connection NPT $\frac{1}{8}$ -27, NPT $\frac{1}{4}$ -18, NPT $\frac{1}{2}$ -14
- 3/3-way valve  
The hand lever valve VHER can be used as a 3/3-way valve by sealing port 2

## Practical

These valves can be used to stop single-acting cylinders (3/3-way valve) or double-acting cylinders (4/3-way valve) within the stroke range.

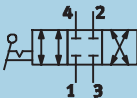
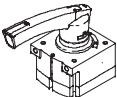


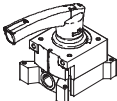


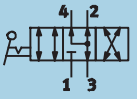
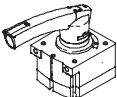


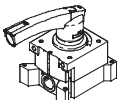


With the mid-position closed, the drive piston moves until the forces are balanced.

With the mid-position exhausted, the piston can be moved manually (only the frictional forces have to be overcome).

# Hand lever valves VHER, NPT

Product range overview

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Function	Version	Type	Nominal flow rate	Lever		Connection size			→ Page/ Internet
			[l/min]	Small	Large	NPT1/8-27	NPT1/4-18	NPT1/2-14	
	Port underneath								
	  	VHER-AH-M04C-N18-UD	800	■	–	■	–	–	7
		VHER-AH-M04C-N14-UD	1,500	–	■	–	■	–	
		VHER-AH-M04C-N12-UD	4,300	–	■	–	–	■	
	Port at side								
	  	VHER-AH-M04C-N18-LD	600	■	–	■	–	–	7
		VHER-AH-M04C-N14-LD	1,150	–	■	–	■	–	
		VHER-AH-M04C-N12-LD	3,500	–	■	–	–	■	
	Port underneath								
	  	VHER-AH-M04E-N18-UD	800	■	–	■	–	–	7
		VHER-AH-M04E-N14-UD	1,500	–	■	–	■	–	
		VHER-AH-M04E-N12-UD	4,300	–	■	–	–	■	
	Port at side								
	  	VHER-AH-M04E-N18-LD	600	■	–	■	–	–	7
		VHER-AH-M04E-N14-LD	1,150	–	■	–	■	–	
		VHER-AH-M04E-N12-LD	3,500	–	■	–	–	■	

# Hand lever valves VHER, NPT

Type codes

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		VHER	-	AH	-	M04C	-	N18	-	LD
<b>Type</b>										
VHER	Hand lever valve with detent									
<b>Design</b>										
AH	Metal lever									
<b>Valve function</b>										
M04C	4/3-way valve, mid-position closed									
M04E	4/3-way valve, mid-position exhausted									
<b>Connection size</b>										
N18	NPT1/8-27									
N14	NPT1/4-18									
N12	NPT1/2-14									
<b>Type of connection</b>										
LD	To the side									
UD	Underneath									

# Hand lever valves VHER, NPT

Overview of peripherals

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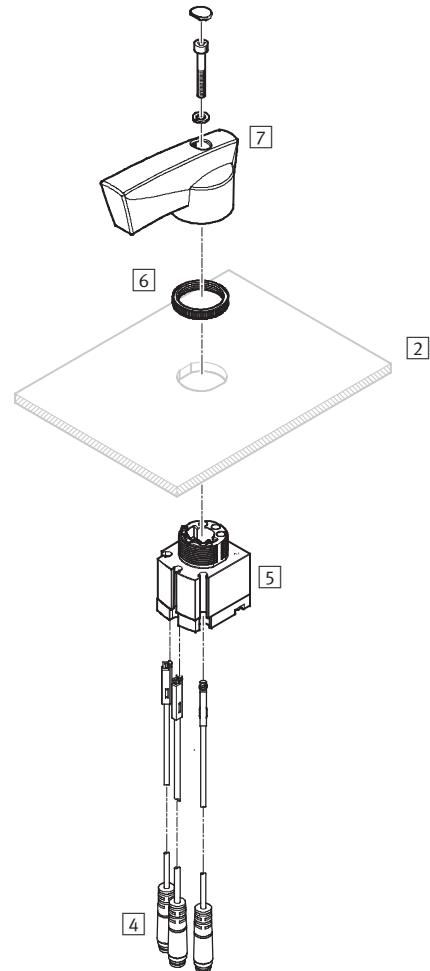
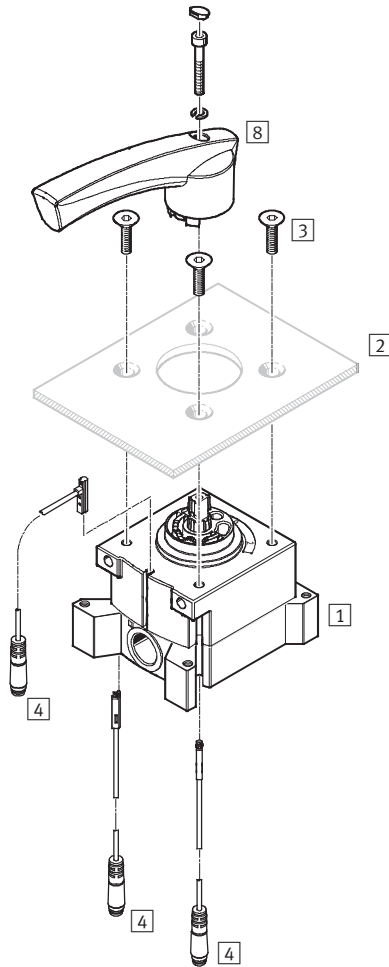
## Control panel installation

Connection size (large): VHER...N14-LD, VHER...N12-LD

Type of connection: To the side

Connection size (small): VHER...N18-UD

Type of connection: Underneath



Component parts and accessories	Brief description	→ Page/Internet
1 Hand lever valve VHER	Connection size NPT $\frac{1}{4}$ -18 and NPT $\frac{1}{2}$ -14	7
2 Control panel	Not included in the scope of delivery	–
3 Mounting screws	Not included in the scope of delivery	–
4 Proximity sensors SME-10-... L, SME-10-... Q	Not included in the scope of delivery	sme
5 Hand lever valve VHER	Connection size NPT $\frac{1}{8}$ -27	7
6 Knurled nut	Control panel mounting	–
7 Actuating lever	Small, metal	
8 Actuating lever	Large, metal	

# Hand lever valves VHER, NPT

Overview of peripherals

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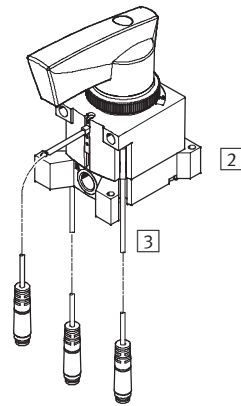
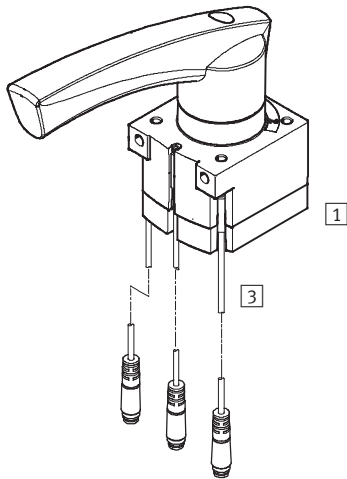
## Assembled valves with accessories

Connection size (large): VHER...N14-UD, VHER...N12-UD

Type of connection: Underneath

Connection size (small): VHER...N18-LD

Type of connection: To the side



Component parts and accessories	Brief description	→ Page/Internet
1 Hand lever valve VHER	Connection size NPT 1/4-18 and NPT 1/2-14 with metal lever	7
2 Hand lever valve VHER	Connection size NPT 1/8-27 with metal lever	7
3 Proximity sensors SME-10-... L, SME-10-... Q	Not included in the scope of delivery	sme

# Hand lever valves VHER, NPT

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Technical data – VHER with metal lever

Flow rate  
600 ... 4,300 l/min

Pressure  
–0.95 ... +10 bar

Temperature range  
–20 ... +80 °C



General technical data					
Connection size			NPT $\frac{1}{8}$ -27	NPT $\frac{1}{4}$ -18	NPT $\frac{1}{2}$ -14
Valve function			4/3-way, closed or exhausted		
Design			Rotary slide valve		
Sealing principle			Hard		
Type of mounting			Option of front panel mounting or via through-holes		
Type of control			Direct		
Actuation type			Manual		
Actuating lever			Metal		
Switching position display			Via accessories		
Mounting position			Any		
Direction of flow			Reversible		
Non-overlapping			Yes		
Exhaust function			Flow control		
Standard nominal flow rate	Port at side	[l/min]	600	1,150	3,500
	Port underneath	[l/min]	800	1,500	4,300
Nominal size		[mm]	6	8	12
Pneumatic connection 1,2,3,4			NPT $\frac{1}{8}$ -27	NPT $\frac{1}{4}$ -18	NPT $\frac{1}{2}$ -14
Actuating torque at 10 bar		[Nm]	1.1	2.8	5

Operating and environmental conditions		
Operating medium		Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm
Operating pressure	[bar]	–0.95 ... 10
Ambient temperature	[°C]	–20 ... +80
Corrosion resistance	[CRC]	2 <sup>1)</sup>

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Proximity sensors for switching position display			
Connection size	Connection direction	Type	
		SME-10-... L	SME-10-... Q
NPT $\frac{1}{8}$ -27	Underneath (UD)	■	■
	At the side (LD)	–	■
NPT $\frac{1}{4}$ -18	Underneath	■	■
	At the side	–	■
NPT $\frac{1}{2}$ -14	Underneath	■	■
	At the side	–	■

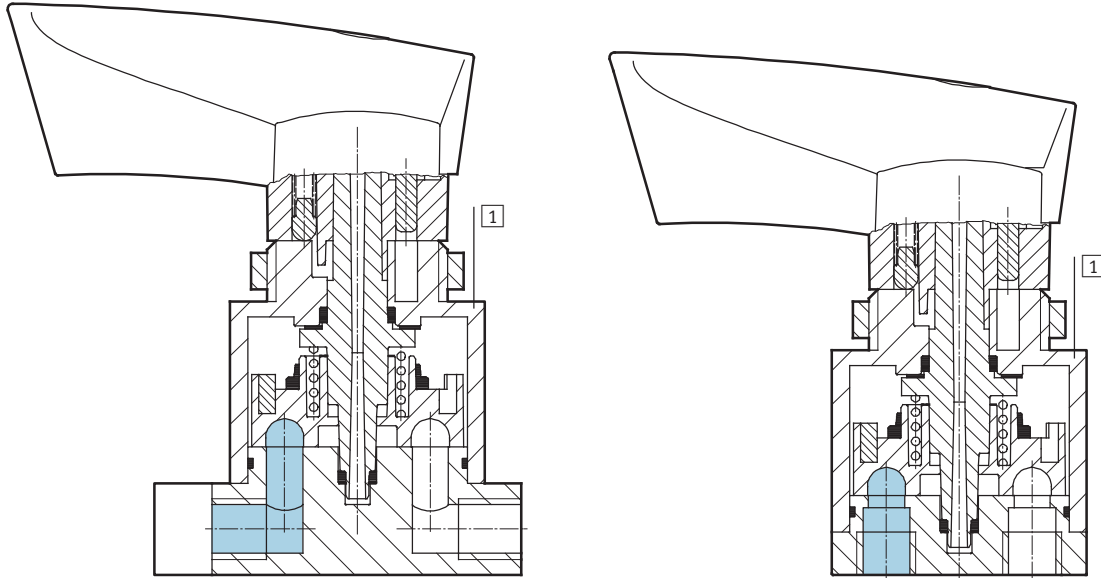
# Hand lever valves VHER, NPT

Technical data – VHER with metal lever

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## Sectional view

Hand lever valve VHER-AH



## Materials

1	Housing	Die-cast aluminium
–	Seals	Nitrile rubber
–		Contains PWIS (paint wetting impairment substances)
–		Free of copper and PTFE



# Hand lever valves VHER, NPT

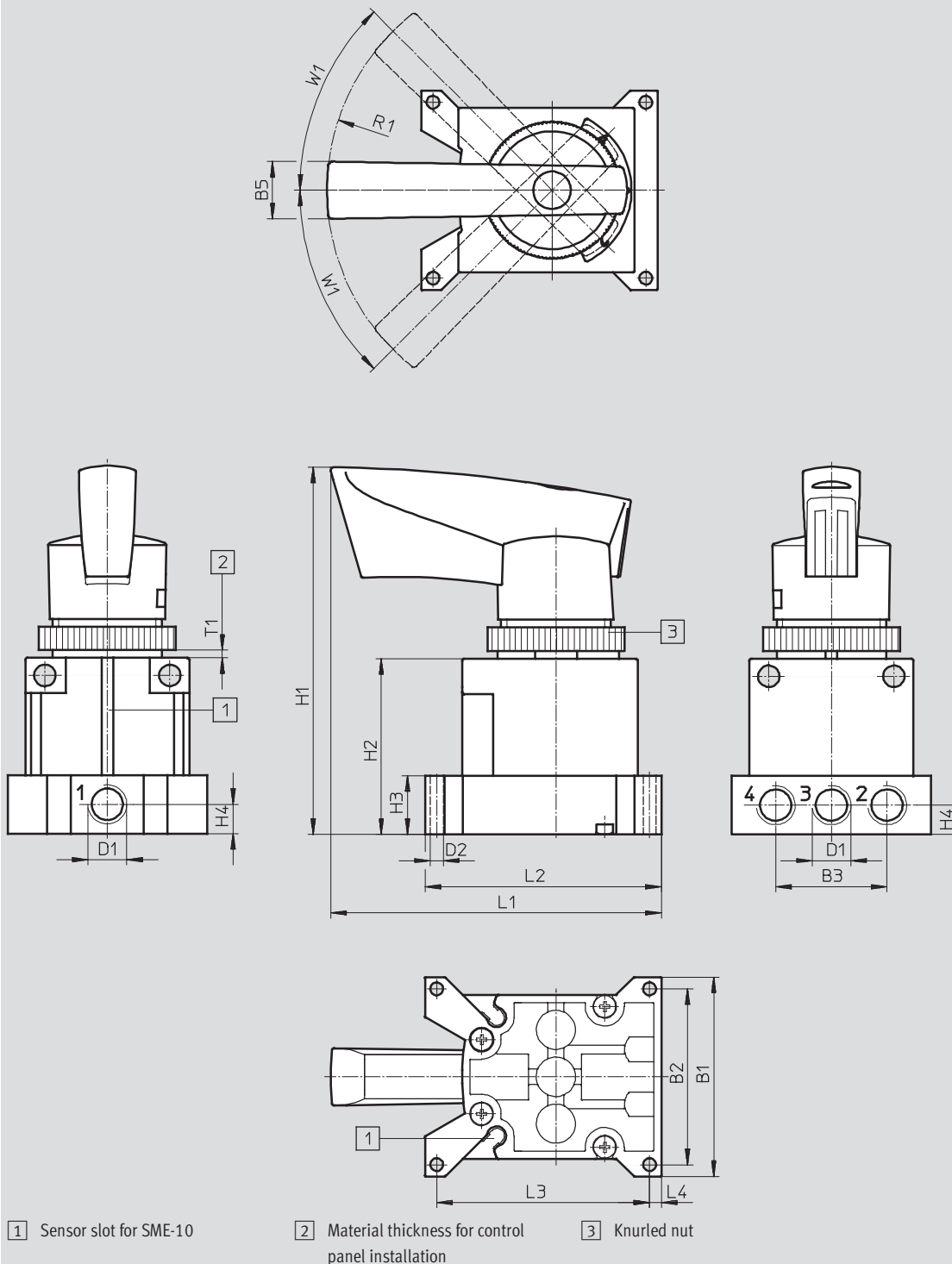
Technical data – VHER with metal lever

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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Pneumatic connection NPT $\frac{1}{8}$ -27, at the side



Type	B1	B2	B3	B5	D1	D2 Ø	H1	H2	H3	H4	L1	L2	L3	L4	R1	T1	W1
VHER-AH-...-N18-LD	51	45	28.5	14.6	$\frac{1}{8}$ NPT	3.3	95	45	15	7.5	85	60.5	54.5	3	57.9	2 ... 4	45°

# Hand lever valves VHER, NPT

Technical data – VHER with metal lever

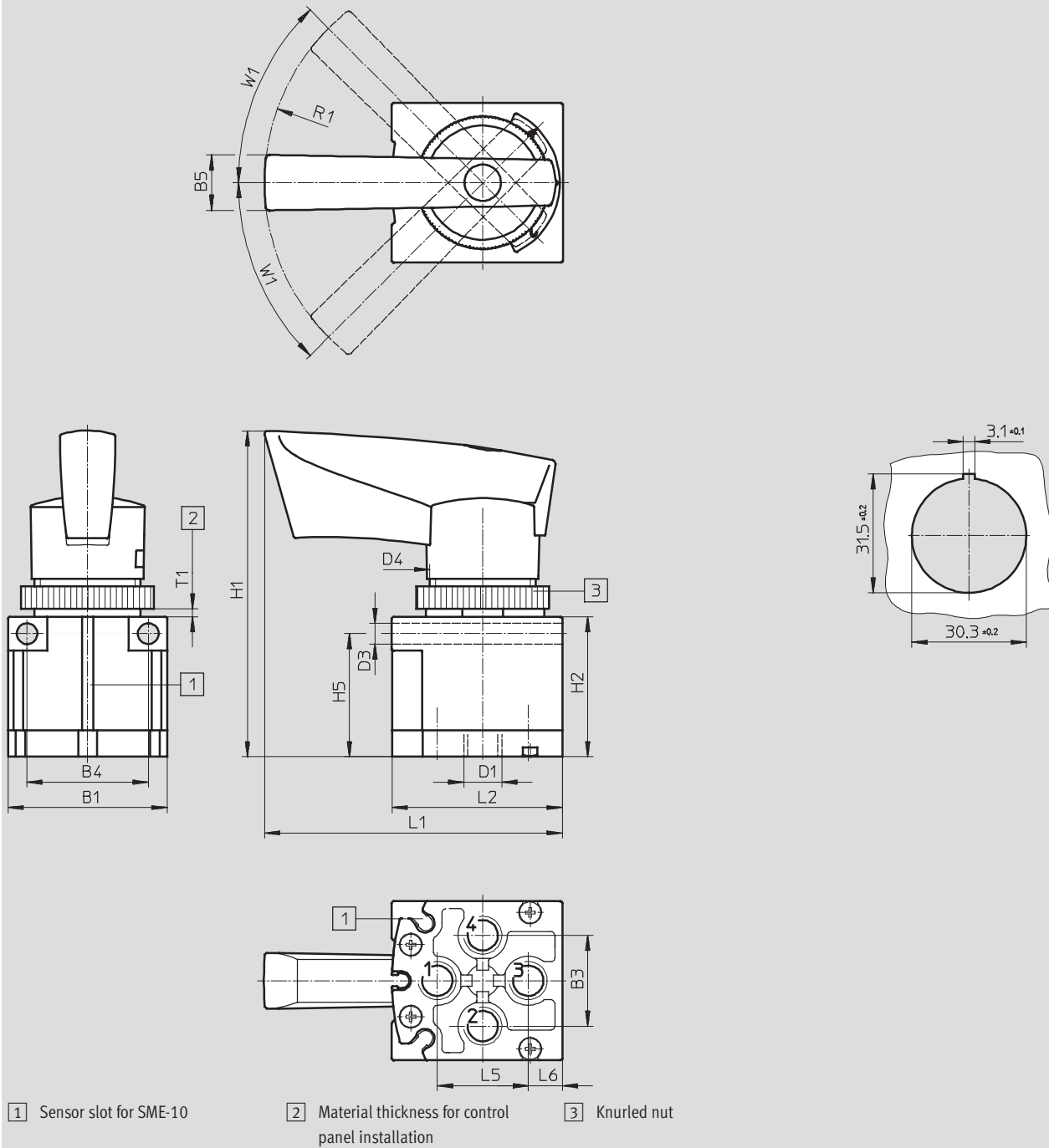
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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Pneumatic connection NPT $\frac{1}{8}$ -27, underneath

Mounting aperture



Type	B1	B3	B4	B5	D1	D3 Ø	D4	H1	H2	H5	L1	L2	L5	L6	R1	T1	W1
VHER-AH-...-N18-UD	42	24	32	14.6	$\frac{1}{8}$ NPT	5.5	M30	87	37	32.5	79	45	24	9	57.9	2 ... 4	45°

# Hand lever valves VHER, NPT

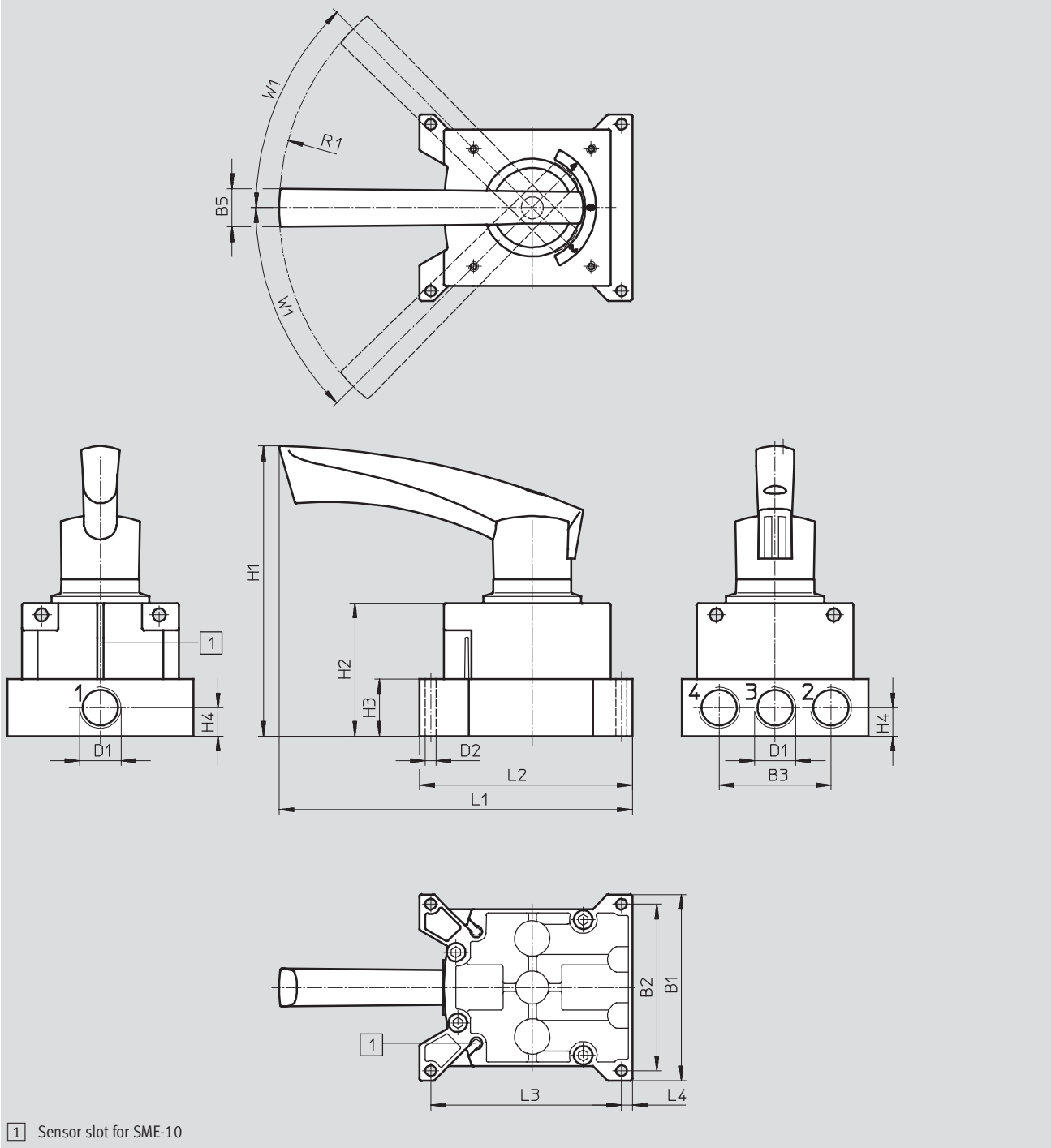
Technical data – VHER with metal lever

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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Pneumatic connection NPT $\frac{1}{4}$ -18 and NPT $\frac{1}{2}$ -14, at the side



Type	B1	B2	B3	B5	D1	D2 Ø	H1	H2	H3	H4	L1	L2	L3	L4	R1	W1
VHER-AH-...-N14-LD	66	57.5	37.5	19.5	1/4NPT	4.5	136	56	20.5	10.3	165	77	69.2	4	128.7	45°
VHER-AH-...-N12-LD	95	85	57	19.5	1/2NPT	5.5	149	68	29	14.5	180	108.5	97.3	5.5	128.7	

# Hand lever valves VHER, NPT

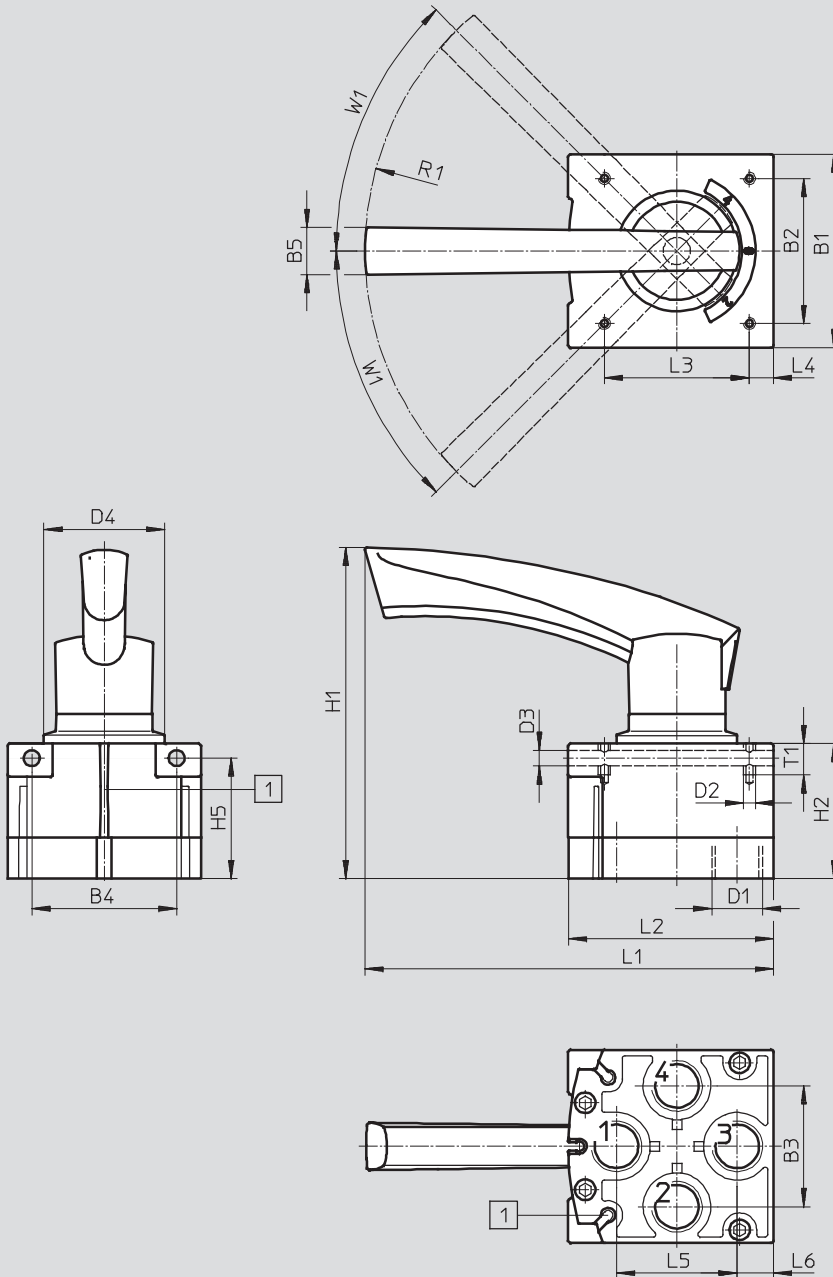
Technical data – VHER with metal lever

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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Pneumatic connection NPT $\frac{1}{4}$ -18 and NPT $\frac{1}{2}$ -14, underneath



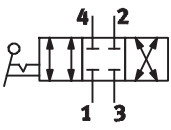
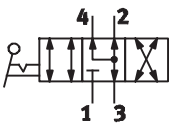
1 Sensor slot for SME-10

Type	B1	B2	B3	B4	B5	D1	D2	D3	D4	H1	H2	H3	L1	L2	L3	L4	L5	L6	R1	T1	W1
VHER-AH-...-N14-UD	56	42	33	42	19.5	1/4 NPT	M5	5.5	40.5	130	49	43.5	157	60	42	7.2	33	11.4	128.7	12	45°
VHER-AH-...-N12-UD	80	60	50	60	19.5	1/2 NPT	M6	6.6	51	137	55.8	49.8	169	85	60	10	50	15	128.7	13	

# Hand lever valves VHER, NPT

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Accessories


Ordering data						
Circuit symbol	Description	Weight [g]	Connection direction	Connection size	Part No.	Type
4/3-way valve <sup>1)</sup>						
	Mid-position closed	260	At the side	NPT1/8-27	545260	VHER-AH-M04C-N18-LD
		560		NPT1/4-18	545264	VHER-AH-M04C-N14-LD
		1,010		NPT1/2-14	545268	VHER-AH-M04C-N12-LD
		220	Underneath	NPT1/8-27	545261	VHER-AH-M04C-N18-UD
		510		NPT1/4-18	545265	VHER-AH-M04C-N14-UD
		860		NPT1/2-14	545269	VHER-AH-M04C-N12-UD
	Mid-position exhausted	260	At the side	NPT1/8-27	545262	VHER-AH-M04E-N18-LD
		560		NPT1/4-18	545266	VHER-AH-M04E-N14-LD
		1,010		NPT1/2-14	545270	VHER-AH-M04E-N12-LD
		220	Underneath	NPT1/8-27	545263	VHER-AH-M04E-N18-UD
		510		NPT1/4-18	545267	VHER-AH-M04E-N14-UD
		860		NPT1/2-14	545271	VHER-AH-M04E-N12-UD

1) The hand lever valve can be used as a 3/3-way valve by sealing port 2.

# Hand lever valves VHER, NPT

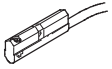
Accessories

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Ordering data				
	Description	Pneumatic connection	Part No.	Type
Blanking plug				
	For sealing ports	NPT $\frac{1}{8}$ -27	173985	B- $\frac{1}{8}$ -NPT
		NPT $\frac{1}{2}$ -14	31785	B- $\frac{1}{2}$ -NPT

Ordering data QS fittings					
Part No.	Type	Part No.	Type	Part No.	Type
VHER-...-N18-UD		VHER-...-N14-UD		VHER-...-N12-UD	
533271	QS-1/8-5/32-U	567772	QS-1/4-5/32-U	533283	QS-1/2-3/8-U
153903	QSM-1/8-1/8-U	533275	QS-1/4-3/16-U	533284	QS-1/2-1/2-U
190677	QSM-1/8-5/32-U	533276	QS-1/4-1/4-U	190698	QS-1/2-1/2-I-U
190688	QS-1/8-5/32-I-U	533277	QS-1/4-5/16-U		
190690	QS-1/8-1/4-I-U	190692	QS-1/4-1/4-I-U		
190691	QS-1/8-5/16-I-U	190693	QS-1/4-5/16-I-U		
190685	QSM-1/8-5/32-I-U	190694	QS-1/4-3/8-I-U		
190689	QSM-1/8-3/16-I-U	190680	QSM-1/4-1/8-U		
VHER-...-N18-LD		VHER-...-N14-LD		VHER-...-N12-LD	
190688	QS-1/8-5/32-I-U	190692	QS-1/4-1/4-I-U	190698	QS-1/2-1/2-I-U
190690	QS-1/8-1/4-I-U	190693	QS-1/4-5/16-I-U		
		190694	QS-1/4-3/8-I-U		

Ordering data Silencers					
Part No.	Type	Part No.	Type	Part No.	Type
VHER-...-N18-UD		VHER-...-N14-UD		VHER-...-N12-UD	
12638	U- $\frac{1}{8}$ -B-NPT	12639	U- $\frac{1}{4}$ -B-NPT	12741	U- $\frac{1}{2}$ -B-NPT
161419	UC- $\frac{1}{8}$	165004	UC- $\frac{1}{4}$		
VHER-...-N18-LD		VHER-...-N14-LD		VHER-...-N12-LD	
161419	UC- $\frac{1}{8}$	165004	UC- $\frac{1}{4}$	12741	U- $\frac{1}{2}$ -B-NPT
		12639	U- $\frac{1}{4}$ -B-NPT		

Ordering data Proximity sensors for VHER						
	Electrical connection		Cable length [m]	Connection direction	Part No.	Type
	Cable	Plug M8x1				
	N/O contact		2.5	In-line	173210	SME-10-KL-LED-24
	3-wire	–			173211	SME-10-KQ-LED-24
	–	3-pin	0.3	In-line	173212	SME-10-SL-LED-24
				Lateral	173213	SME-10-SQ-LED-24

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